REMARKS

Claims 1-35 are now pending in the application. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

DRAWINGS

The drawings stand objected to for certain informalities. Applicants have attached revised drawings for the Examiner's approval. More specifically, the weights of the lead lines in FIGs. 1-25 have been increased according to the Examiner's suggestions.

The Examiner also objected to the drawings under 37 CFR 1.83(a). The Examiner stated that a "solid model filled up with contents on the basis of said shape condition" must be shown in the drawings. Applicants have amended Claims 1, 10, 18, and 27 to include a "solid model that is at least partially filled with contents on the basis of said shape condition". Additionally, Applicants point out that Claims 1, 10, 18, and 27 refer to a three-dimensional outer shape of a hollow container that is *defined* as a solid model that is at least partially filled with contents on the basis of a shape condition (Emphasis added). In other words, the three-dimensional outer shape of the hollow container is not necessarily *displayed* as a solid model filled with contents on the display apparatus.

On page 5, line 11, Applicants teach that defining the container as a solid model filled with contents quickens and simplifies parameter calculations. For example, calculations such as those relating to the capacity, center of gravity, and tipping angle of the container are simplified and performed more quickly. As shown in FIG. 4, the bottle specification section of the parametric inputting window allows a user to specify a fill level

AMENDMENTS TO THE DRAWINGS

The attached sheets of drawings include changes to FIGs. 1-25. The attached sheets, which include FIGs. 1-25, replace the original sheets including FIGs. 1-25.

Attachment: Replacement Sheets

of a container. The fill level may correspond to a distance between the top of contents that occupy the container and the top of the container itself. Alternatively, the fill level may also correspond to a ratio of headspace capacity to container capacity.

The capacity modulating means utilizes the fill level and other parameters from the parametric inputting means to adjust the shape of the container. The capacity modulating means ensures that the fill level remains constant as defined in the parametric inputting means when a secondary processing is performed. Therefore, Applicants believe that the drawings show every feature of the invention specified in the claims. Accordingly, reconsideration and withdrawal of this objection are respectfully requested.

SPECIFICATION

The specification stands objected to for certain informalities. Applicants have amended the specification according to the Examiner's suggestions. More specifically, Applicants have made extensive amendments to the specification in order to comply with 35 U.S.C. § 112, first paragraph. Additionally, Applicants have amended Claims 1, 10, 18, and 27 to include a "solid model that is at least partially filled with contents on the basis of said shape condition". Therefore, Applicants believe the specification now provides proper antecedent basis for the claimed subject matter. Accordingly, reconsideration and withdrawal of this objection are respectfully requested.

REJECTION UNDER 35 U.S.C. § 101

Claims 18-35 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. This rejection is respectfully traversed.

Referring to Claim 18, Applicants have amended Claim 18 so that it is directed toward "a container designing system". Applicants believe that Claim 18 is now directed toward statutory subject matter and that the rejection of Claim 18 under 35 U.S.C. § 101 is now moot.

Claims 19-26 depend directly or indirectly from Claim 18. Therefore, Applicants believe that the rejection of Claims 19-26 under 35 U.S.C. § 101 is also now moot.

Referring to Claim 27, Applicants have amended Claim 27 so that is directed toward a computer-accessible recording medium that is encoded with a container designing program, wherein the container designing program is executed by a computer. Applicants believe that Claim 27 is now directed toward statutory subject matter and that the rejection of Claim 27 under 35 U.S.C. § 101 is not moot.

Claims 28-35 depend directly or indirectly from Claim 27. Therefore, Applicants believe that the rejection of Claims 28-35 under 35 U.S.C. § 101 is also now moot.

REJECTION UNDER 35 U.S.C. § 112

Claims 1-35 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point and distinctly claim the subject matter which Applicant regards as the invention. This rejection is respectfully traversed. Applicants have made extensive amendments to the claims in order to comply with 35 U.S.C. § 112, second paragraph.

Referring to Claims 1, 10, 18, and 27, Applicants have amended Claims 1, 10, 18, and 27 to include a "solid model that is at least partially filled with contents on the basis

of said shape condition". Therefore, Applicants believe that the rejection of Claims 1, 10, 18, and 27 under 35 U.S.C. § 112, second paragraph, is now moot.

Claims 2 and 7, Claim 15, Claims 19 and 24, and Claims 28 and 33 depend directly from Claims 1, 10, 18, and 27, respectively. Therefore, Applicants believe that the rejection of Claims 2, 7, 15, 19, 24, 28, and 33 under 35 U.S.C. § 112, second paragraph, is also now moot.

Referring to Claims 3-5, 11-13, 20-22, and 29-31, Applicants have amended Claims 3-5, 11-13, 20-22, and 29-31 so that a Boolean operation, a fillet operation, and a deformable operation constitute a secondary processing. Additionally, Applicants have amended Claims 4, 12, 21, and 30 to remove the term "smoothly". Therefore, Applicants believe that the rejection of Claims 3-5, 11-13, 20-22, and 29-31 under 35 U.S.C. § 112, second paragraph, is now moot.

Referring to Claims 6, 14, 23, and 32, Applicants have amended Claims 6, 14, 23, and 32 to include a continuous "spiral shape on an exterior surface of said hollow container that protrudes a distance from said exterior surface". Therefore, Applicants believe that the rejection of Claims 6, 14, 23, and 32 under 35 U.S.C. § 112, second paragraph, is now moot.

Referring to Claims 8, 9, 16, 17, 25, 26, 34, and 35, Applicants have amended Claims 8, 9, 16, 17, 25, 26, 34, and 35 to remove the term "it is possible to". Therefore, Applicants believe the rejection of Claims 8, 9, 16, 17, 25, 26, 34, and 35 under 35 U.S.C. § 112, second paragraph, is now moot.

REJECTION UNDER 35 U.S.C. § 102

Claims 1, 2, 4-6, 8, 10, 12-14, 16, 18, 19, 21-23, 25, 27, 28, 30-32, and 34 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Lee et al. (U.S. Pat. App. Pub. No. 2004/0085311). This rejection is respectfully traversed.

Referring to Claim 1, Lee et al. do not show, teach, or suggest a solid model definition module for defining a three-dimensional outer shape of a hollow container as a solid model that is at least partially filled with contents on the basis of a shape condition.

Lee et al. teach a method for designing geometric objects in a computer aided design (CAD) system. The geometric surfaces include surfaces that are designed to interpolate two parametric surfaces (paragraph [0092]). Feature curves located at and between the parametric surfaces also provide constraints on the surfaces. Geometric characteristics of both parametric surfaces are imposed on the interpolating surfaces (paragraphs [0093] and [0094]). Additionally, the surfaces interpolate through one or more feature curves between the parametric surfaces. This allows a designer to design a surface that is specified in terms of a small number of feature curves and desired slopes of the surface along the feature curves (paragraph [0096]).

Lee et al. teach that the creation and manipulation of specialized geometric object types can facilitate the design of containers (paragraph [0347]). However, neither the parametric surfaces nor the interpolating surfaces are defined as a solid model that is at least partially filled with contents, as required by the claims. Lee et al. use the specialized geometric object types in conjunction with containers to develop distinctive or functional surfaces on the containers. For example, Lee et al. do not teach

inputting parametrically defined shape conditions in order to specify a desired capacity of a container as taught by Applicants. Therefore, a shape of a container is not automatically adjusted to maintain a predetermined capacity when a physical structure of the container is altered.

On page 5, line 11, Applicants teach that defining a container as a solid model filled with contents quickens and simplifies parameter calculations such as capacity, center of gravity, and tipping angle. Therefore, Applicants teach first inputting parametrically defined shape conditions such as fill level, which indicate a rough outer shape of a container. A bottle shape is then defined by inputting a cross-sectional profile of a container. An outer shape of the container is defined and displayed based on the shape conditions and the cross-sectional profile. Since the outer shape of the container is based partially on a fill level of the container, the outer shape is a three-dimensional representation of the container and is defined as a container that is at least partially filled with contents. The outer shape is then optionally subjected to secondary processing. In the event that the outer shape is altered during secondary processing, the size of the bottle is automatically adjusted to accommodate the change while maintaining the desired capacity.

Claims 2-9 depend directly or indirectly from Claim 1 and are allowable over Lee et al. for the same reasons.

Referring to Claim 10, Lee et al. do not show, teach, or suggest defining a three-dimensional outer shape of a hollow container as a solid model that is at least partially filled with contents on the bases of a shape condition.

The arguments made above with respect to Claim 1 are equally applicable to Claim 10. Lee et al. teach a method for designing geometric objects including surfaces that are designed to interpolate two parametric surfaces. However, neither the parametric surfaces nor the interpolating surfaces are defined as a solid model that is at least partially filled with contents. Therefore, a shape of a container is not automatically adjusted to maintain a predetermined capacity when a physical structure of the container is altered.

Claims 11-17 depend directly or indirectly from Claim 10 and are allowable over Lee et al. for the same reasons.

Referring to Claim 18, Lee et al. do not show, teach, or suggest a container designing program that includes a solid model definition module for defining a three-dimensional outer shape of a hollow container as a solid model that is at least partially filled with contents on the basis of a shape condition.

The arguments made above with respect to Claim 1 are equally applicable to Claim 18. Neither the parametric surfaces nor the interpolating surfaces taught by Lee et al. are defined as a solid model that is at least partially filled with contents. Lee et al. use the specialized geometric object types in conjunction with containers to develop distinctive or functional surfaces on the containers.

Claims 19-26 depend directly or indirectly from Claim 18 and are allowable over Lee et al. for the same reasons.

Referring to Claim 27, Lee et al. do not show, teach, or suggest a computer-accessible recording medium that is encoded with a container designing program, wherein the container designing program includes a solid model definition module for

defining a three-dimensional outer shape of a hollow container as a solid model that is at least partially filled with contents on the basis of a shape condition.

The arguments made above with respect to Claim 1 are equally applicable to Claim 27. Lee et al. teach that the creation and manipulation of specialized geometric object types can facilitate the design of containers. However, neither the parametric surfaces nor the interpolating surfaces taught by Lee et al. are defined as a solid model that is at least partially filled with contents.

Claims 28-35 depend directly or indirectly from Claim 27 and are allowable over Lee et al. for the same reasons.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

Dated: Feb 24, 2005

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